

**AMENDMENTS TO THE CLAIMS**

1. (Withdrawn) A method for detecting a mutation in presenilin associated membrane protein (PAMP) associated with a neuropsychiatric or neurodevelopmental disorder, which method comprises detecting a variation in a sequence of a gene encoding PAMP obtained from an individual diagnosed with or suspected of having said disorder.
2. (Withdrawn) The method of claim 1, wherein the disorder is schizophrenia.
3. (Withdrawn) A method for diagnosing individuals predisposed to or having a neuropsychiatric or neurodevelopmental disorder, which method comprises detecting a mutation in a gene encoding PAMP obtained from an individual.
4. (Withdrawn) The method of claim 3, wherein the disorder is schizophrenia.
5. (Withdrawn) The method according to claim 3, wherein detection of the mutation comprises measuring a level of transcriptional activity of the gene.
6. (Withdrawn) The method according to claim 3, wherein detection of the mutation comprises measuring PAMP activity.
7. (Withdrawn) The method of claim 6, wherein said PAMP activity comprises PAMP expression level or activity of a product of a PAMP modified substrate.
8. (Withdrawn) A method for identifying a compound that is useful in treating a neuropsychiatric or neurodevelopmental disorder, which

method comprises detecting modulation of of PAMP expression in a transgenic animal that expresses PAMP, wherein the animal is contacted with the compound.

9. (Withdrawn) The method of claim 8, wherein the disorder is schizophrenia.
10. (Currently amended) A method for identifying a candidate compound ~~that is useful in~~ for treating a neuropsychiatric or neurodevelopmental disorder, which method comprises:
  - (a) contacting a reconstituted system for measuring presenilin associated membrane protein (PAMP) activity, comprising a PAMP, or a functional fragment thereof, and a PAMP substrate, with a test compound, the PAMP comprising an amino acid sequence at least 90% identical to at least one amino acid sequence selected from the group consisting of SEQ ID NO:14, SEQ ID NO:16 and SEQ ID NO:18; and
  - (b) detecting a difference in PAMP activity in the presence of the compound compared to ~~the~~ PAMP activity in the absence of the compound,

wherein the difference in PAMP activity identifies the candidate compound.
11. (Original) The method of claim 10, wherein the disorder is schizophrenia.
12. (Withdrawn) A method for identifying a compound that is useful in treating a neuropsychiatric or neurodevelopmental disorder, which method comprises:

- (a) contacting a complex between a presenilin associated membrane protein (PAMP) and an agent, which agent provides a detectable conformational or functional change in said PAMP upon interaction with a substance being analyzed for activity against a neurodegenerative disease, with a test compound; and
- (b) detecting a conformational or functional change in PAMP in the complex.
13. (Withdrawn) The method of claim 12, wherein the disorder is schizophrenia.
14. (Withdrawn) The method of claim 12, wherein the test compound is a protein that interacts with PAMP.
15. (Withdrawn) A method for treating neuropsychiatric or neurodevelopmental disorder in a mammalian host which expresses at least one PAMP protein or a naturally occurring variant, which method comprises administering to the host an amount of compound effective to modulate PAMP expression in the host.
16. (Withdrawn) The method of claim 15, wherein the disorder is schizophrenia.
17. (New) The method of claim 10, wherein the PAMP amino acid sequence comprises a DYIGS amino acid sequence motif starting at a position corresponding to residue 336 of SEQ ID NO:14.
18. (New) The method of claim 10, wherein the PAMP substrate is presenilin 1.
19. (New) The method of claim 10, wherein the PAMP substrate is  $\beta$ APP.

